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ISSUANCES

of the

Meat and Poultry Inspection Program

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5-21-75

April 1975



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CFR Amendments
Airsacculitis
Humanely Slaughtered Livestock

Changes
75-4, Meat and Poultry Inspection
Manual

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Meat and Poultry Inspection Program
Washington, D.C. 20250

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April 21, 1975

UNITED STATES DEPARTMENT OF AGRICULTURE

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

MEAT AND POULTRY INSPECTION PROGRAM

WASHINGTON, D. C. 20250

CFR AMENDMENT
Rulemaking

Title 9—Animal and Animal Products
CHAPTER III—ANIMAL AND PLANT
HEALTH INSPECTION SERVICE (MEAT
AND POULTRY PRODUCTS INSPEC-
TION), DEPARTMENT OF AGRICUL-
TURE

SUBCHAPTER C—MANDATORY POULTRY
PRODUCTS INSPECTION

PART 381—POULTRY PRODUCTS
INSPECTION REGULATIONS

Airsacculitis

Pursuant to the authority contained in section 14 of the Poultry Products Inspection Act, as amended (21 U.S.C. 463), the poultry products inspection regulations are amended to establish requirements for post-mortem disposition of birds affected with airsacculitis.

Statement of Considerations: On September 21, 1973, there appeared in the FEDERAL REGISTER (38 FR 26454), a notice of proposed rule making to amend the poultry products inspection regulations to prescribe criteria for condemning birds affected with airsacculitis.

A total of six comments were received. Three were from packers and industry trade groups which expressed support for the proposal. The State of California also endorsed the proposed amendment. One comment did not address the proposal and was, therefore, not considered.

The remaining comment, submitted by an employee of this Department, requested clarification of the proposed language to provide in more exacting terms at what stage of the disease poultry should be condemned. Airsacculitis, like most disease conditions, varies in its extent of tissue involvement from bird to bird. Ensuing pathological changes on a localized and systemic basis do not follow the same pattern in all instances. The development of definitive guidelines to cover all cases would be impossible. It is the Department's position that the proposed language is adequate, and can serve as a basis for veterinarians within the Inspection Service to render dispositions of birds affected with airsacculitis.

After consideration of all comments received, the amendment is hereby adopted as set forth in the proposal.

In Subpart K, the table of contents is amended by adding a reference to § 381.84, and a new § 381.84 is added to read as follows:

§ 381.84 Airsacculitis.

Carcasses of poultry with evidence of extensive involvement of the air sacs with airsacculitis or those showing airsacculitis along with systemic changes shall be condemned. Less affected carcasses may be passed for food after complete removal and condemnation of all affected tissues including the exudate.

(Sec. 14, 71 Stat. 447, as amended, 21 U.S.C. 463; 37 FR 28464, 28477)

It does not appear that further public participation in rule making proceedings on this amendment would make additional relevant information available to the Department which would alter this decision. Therefore, under the administrative procedure provisions in 5 U.S.C. 553, it is found upon good cause that further notice or other public rule making proceedings on this amendment are impracticable and unnecessary.

This amendment shall become effective June 30, 1975.

Done at Washington, D.C., on: March 25, 1975.

F. J. MULHERN,
Administrator, Animal and
Plant Health Inspection Service.

CFR Amendment
(Notice)

Animal and Plant Health Inspection Service
HUMANELY SLAUGHTERED LIVESTOCK

Identification of Carcasses; Changes in Lists of Establishments

Pursuant to section 4 of the Act of August 27, 1958 (7 U.S.C. 1904), and the statement of policy thereunder in 9 CFR 391.1, the lists (39 FR 41998 and 40 FR 6519) of establishments which are operated under Federal inspection pursuant to the Federal Meat Inspection Act, as amended (21 U.S.C. 601 *et seq.*), and which use humane methods of slaughter and incidental handling of livestock are hereby amended as indicated in the following table listing species at additional establishments and an additional species at a previously listed establishment that have been reported as being slaughtered and handled by humane methods.

Establishments slaughtering humanely

Name of establishment	Establishment No.	Cattle	Calves	Sheep	Goats	Swine	Equine
Wayne H. Hoffman and Son.....	4040	*	*	*		*	
Oaklawn Grain and Feed, Inc.....	7157					*	
Hobson's Meat Slaughter and Processing.....	7274	*					
R. G. Gunnoe Farms, Inc.....	8392					*	
Scott Meat Packers, Inc.....	9160	*	*			*	
New establishments reported: 5.							
Mark's Meat Co.....	9265			*			
Species Added: 1.							

Done at Washington, D.C., on: April 7, 1975.

F. J. MULHERN,
Administrator, Animal and Plant Health Inspection Service.
[FR Doc.75-9546 Filed 4-11-75;8:45 am]



UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Meat and Poultry Inspection Program
Washington, D.C. 20250



MEAT AND POULTRY INSPECTION MANUAL

CHANGE: 75-4

Maintenance Instructions

April 1975

Remove Page	Numbered	Insert Page	Numbered
25,26,27, and 28	Unnumbered	25 26,27, and 28	Unnumbered Change 75-4
47 and 48	Unnumbered	47 48	Unnumbered Change 75-4
81,82,83, and 84	Unnumbered	81 82,83, and 84	Unnumbered Change 75-4
109 and 110	Change 9	109 110	Change 9 Change 75-4
131 132	Unnumbered Change 14	131 132 and 132a	Unnumbered Change 75-4
215,216,217, and 218	Change 10	215 216 and 217 218	Change 10 Change 75-4 Change 10
261 and 262 263 264,265, and 266	Unnumbered Change 14 Unnumbered	261 262 thru 266	Unnumbered Change 75-4

Pen-and-Ink Changes

Page 119, left column, first line, change "remained" to "retained."

(e) Fingernails

Persons handling exposed product shall keep their fingernails clean and neatly trimmed. Fingernail polish is not permitted.

8.18 NONFOOD HANDLER

All reasonable precautions shall be taken to prevent product contamination by visitors, maintenance personnel and others.

Employees' traffic patterns that may result in product contamination should be eliminated.

WATER SUPPLY**Subpart 8-D**

(Regs: M-308; P-Subpart H)

Plant water must be from an approved source, properly stored and distributed, and certified by local health agency. Nonpotable water may be used only as specified by regulations.

8.21 SOURCE**(a) Public**

Water from an approved supply is generally acceptable as delivered to a plant; however, it may get contaminated during plant distribution.

(b) Private

Private wells must be on premises, and must be completely protected from contamination by surface water, drainage from septic tanks, livestock pens, etc. Ground water must percolate through at least 10 feet of soil before entering the well.

8.22 CHLORINATION**(a) Chlorinators**

When chlorination is required to approve a private water supply, automatic chlorinators with devices indicating malfunctions must be used.

(b) Chlorine Test

Plant management is responsible for providing chlorine-testing kits, and for testing the water at least weekly to determine whether chlorine levels are as specified by State health agency.

(c) Chlorinated Water Sprays

They may be used intermittently on carcasses while being chilled and for bacteriostatic purposes, provided the procedure is approved by STS-ISR. Enough data should be submitted showing that the proposed method (1) has beneficial results, (2) does not cause insanitary conditions--rust, condensation, etc.--and (3) plant's control assures no weight gain for any carcass.

After approval, STS-ISR will devise a procedure to monitor the plant's control program.

Also as part of the control program each plant must provide at least five aerobic plate count determinations per month both before and after spraying. In addition, five semiannual determinations for the coliform group, coagulase positive staphylococci and salmonellae both before and after spraying must be provided. Microbiological determinations shall be obtained by a suitable swab-dilution technique or equivalent procedure and the surface area examined shall be at least 4 square inches. All results submitted shall be provided in terms of bacteria per square inch except for salmonella determinations which may be reported as "present" or "absent." The inspector will maintain them in his official file for further analysis as directed by STS-ISR. Purpose of above microbiological counts is to

establish a record of continued efficacy. Upon a showing of undue hardship, plants with limited volume may propose, for evaluation by MPI, alternate means of establishing efficacy.

8.23 NONPOTABLE WATER

Untreated water from a river, lake, or unapproved well is considered nonpotable and, if used, shall meet all regulation requirements.

Contamination Hazards. Where nonpotable water is permitted, it must be used with adequate safeguards to prevent contact with edible products or potable water. Dead-end pipelines and improper cross connections of potable and nonpotable water lines shall be eliminated.

8.24 ICE

Water for ice making purposes must be potable. Ice producing, storing and handling equipment must be inspected for sanitary conditions.

* Ice carried out of a poultry chiller
* with product may be replaced into the
* chilling system, provided it is col-
* lected and handled in a sanitary
* manner acceptable to the inspector in
* charge, and the ice is reused within
* the same day. If its cleanliness is
* questionable, it shall be rejected.
* Ice shall not be reused for chilling
* poultry product during further
* processing.

Since ice bag surfaces may become contaminated during handling, ice bags should not be placed over chill vats for emptying, unless the outer layer is removed.

Water and Ice Storage. It must be on the premises, and must be adequately protected from contamination.

Ice making or storing facilities (storage bins, etc.) should be lined with stainless steel or rust-resistant material. The metal should be of sufficient thickness to withstand repeated striking of a shovel without

Change 75-4

puncturing. Suitable perforated, rust-resistant, and removable metal drainage plates should be provided at the bottom of the ice storage compartment, and frequently inspected to assure cleanliness. In some equipment used for producing flaked ice, water resulting from melted ice collects in a space below the ice storage compartment. This water should not be used in producing ice, nor in potable water lines or supply. It may be used to prechill water circulated in closed coils.

8.25 REUSE OF WATER

It must comply with the regulations. Complete drainage and disposal of reused water, effective equipment cleaning, and reused water renewal with fresh potable water must be done frequently enough to assure an acceptable water supply for intended purpose.

(a) Chilling Unit Water

Overflow water from poultry chilling units may be used to move heavy solids in eviscerating troughs, but not to flush the trough's sides. After screening out visible solids, it may also be used in scald tanks, wax-hardening operations, feather flowaways, picker aprons, and for washing picking room floors.

(b) Water from Condenser or Compressor

It may be used as stated above if the system is closed and back-siphonage is prevented, or where artificially heated water is permitted, provided its potability is certified by a local or State health agency.

8.26 BACK-SIPHONAGE

Contaminated or polluted water may enter a water supply system when negative pressure develops. This can be prevented by eliminating submerged water lines or by using functional vacuum breakers between the last cut-off valve and the submerged line.

8.27 SAMPLING

Plant management is responsible for having a local or State health agency test and certify the water. Samples shall be taken at several points in the plant where water is used.

- * There are occasions where more than
- * one establishment is located in the
- * same building. If the entire building
- * contains only official establishments,
- * and there is a common water supply, it
- * is permissible to randomly sample
- * rather than sampling each establish-
- * ment in the building.

(a) Frequency

Water shall be sampled as often as necessary. Minimum requirements are: public water supply--annually; private water supply--semiannually; water from condensers--annually.

(b) Certification File

A file shall be kept in the inspector's office including: water and ice potability certificates and sampling results; pertinent information (i.e., well location, nonpotable water use, approvals, etc.); survey and inspection records.

SANITATION OF FACILITIES AND EQUIPMENT

Subpart 8-E

(Regs: M-308; P-Subpart H)

Facilities, equipment, and utensils shall always be clean and in good repair.

8.30 CLEANING AND SANITIZING

(a) Rooms, Compartments, Walls, Posts

Frequent and satisfactory cleaning of certain plant parts is necessary to (1) prevent accumulation of organic wastes resulting from meat and poultry operations, (2) prevent development of foul odors, and (3) provide a sanitary environment for handling food products. Method, frequency, and area to be cleaned may vary with operations.

Masonry walls or posts shall be kept clean, in good repair, and be protected by guardrails or suitable devices.

(b) Equipment and Utensils

They must be cleaned frequently or at least daily and, if necessary, before each use or between shifts to prevent organic matter accumulation.

(1) Litmus paper. Alkali or acid residues from cleaning agents may be detected with litmus paper.

(2) Various equipment (meat). The following items must be washed and sanitized after each carcass:

1. Contaminated equipment or utensil (pus, feces, ingesta, etc.).
2. Equipment or utensil used for suspect, retained, obviously diseased, or condemned carcasses or parts.

3. Brisket opening equipment.
4. Dehorning device.
5. Weasand rod.
6. Tail skinning clamp, unless tail tip ahead of clamped part is removed and discarded.
7. Swine head dropping knife.
8. Swine carcass splitting saw (when carcass is split before viscera inspection).
9. Equipment used in carcass splitting and withers "Topping" (horses).

(3) Head hooks; loops. Equipment used for holding (cattle) heads during trimming shall be periodically rinsed.

Head hooks or loops in washing cabinets shall be rinsed after each head.

In continuous chain layouts, head hooks shall be washed and sanitized in approved and suitable cabinets or devices that will prevent splash onto heads, carcasses, facilities, or equipment.

(4) Automated moving table (meat).

It must be continuously washed and sanitized with 180° F. water.

An easily read and appropriately located thermometer is required to determine compliance.

(5) Viscera truck. It shall be washed and sanitized in approved areas, set aside to prevent splash contamination to product, facilities or equipment.

Viscera truck must be thoroughly washed and sanitized with 180° F. water (1) when contaminated (feces, ingesta, urine, pus, any exudate, condemned viscera, etc.), and (2) after plant break and lunch period.

Exception! Viscera truck may be reused with water rinse after each set of viscera, when livers are condemned for telangiectasis, "sawdust", unopened abscesses or liver flukes, provided it is not contaminated and is periodically washed with hot water to prevent fat buildup.

(6) Blood collecting equipment (meat). Funnel, containers, and knife must be rinsed after each carcass, and must be also sanitized after each identifiable lot of blood.

(7) Scalding tank. Scalding tanks must be drained and cleaned daily. Clean (potable) water must be used at the start of each day's operation.

(8) Shrouds. Shroud cloths shall be washed and thoroughly rinsed after each use.

New shrouds shall be washed before use to remove loose material and dirt.

Shrouds may be soaked in clean water or certain solutions--common salt, less than 20° salometer strength; acetic acid, less than 1 percent; sodium hypochlorite, less than 20 ppm--provided:

1. Carcasses are not clothed to increase weight through water absorption.

2. Cloths are not heavier and thicker than a heavy muslin grade and are applied in one layer only, except at unavoidable overlapping points.

3. Solution soaked shrouds are applied to carcasses only once.

4. Cloth rolls (sometime used in neck, renal, or iliac regions) are not wet in solution.

5. Carcass branding complies with regulations and Subpart 16-B of this manual.

(9) Pins. Shroud pins, used to attach shrouds to carcasses, must be cleaned before each use.

(10) Elevator. In some elevator shafts, water or other liquids from threshold of floor above may fall onto product moved on or off the elevator at lower levels. To correct this, a channel pitched to the corner of the shaft may be cut into the vertical face of the floor support. Then, an open, heavy steel gutter may be attached for cleaning and conveying all liquids

treatment in separate, identified facilities. Following recovery, they may be reexamined by an MPI veterinarian. If normal, they may be passed for slaughter.

(b) Poultry

Condemned poultry shall be humanely slaughtered. A suggested method is pulling the head downward and sharply backward, leaving the skin intact. This results in separation of the first neck joint, spinal cord, and blood vessels. Floor and equipment contamination should be avoided.

Condemned birds must be counted, weighed, and reported on Form MP 514, Poultry Inspection, Lot Tally Sheet.

9.16 DOA'S

Dead-on-arrival (DOA) carcasses shall be identified and disposed of as required by the regulations and part 14 of this manual.

Livestock DOA'S shall be tagged "U.S. Condemned."

Poultry DOA'S shall be identified, counted, weighed, and the number reported on Form MP 514.

9.17 ABNORMALITIES; DISEASES

(a) Livestock

(1) Downers. They shall be withheld from slaughter for 24 hours. If after such period they are weaker and/or with more exaggerated signs, they shall be condemned. Those without change shall be handled as suspects. Carcass disposition will be based on ante- and post-mortem findings, and on results of histopathological examination of heart, brain, liver, kidney, spleen, and diseased tissues.

Exception! Animals with signs of recent trauma or localized conditions impairing walking can be released for slaughter as suspects (provided drug or chemical withholding periods are met).

(2) Emergency slaughter. Sick, dying, or animals treated with a drug

or chemical and presented for slaughter before the required withdrawal period are not covered by the emergency slaughter provisions in the regulations (M-311.27).

(3) Abnormal calves. Immature, diseased, weak, and uncoordinated calves must not be slaughtered for human food.

(4) Eye missing. Any bovine with an eye or associated structure missing shall be handled as suspect.

(5) Escaped animals; control. Darts containing tranquilizer drugs may be used to control and handle animals that have escaped, provided approved drugs are used and required withdrawal periods are observed.

The following drugs (trade names) with applicable species and withdrawal periods may be used:

Sparine--all animals, 36 hours.
Vetame--cattle, 48 hours; sheep, 72 hours; swine, 6 days.

(6) Proteolytic enzyme. Only normal cattle can be injected with an enzyme solution.

Treated animals must be slaughtered between 2 to 30 minutes.

Cattle showing any injection reaction--salivation, incoordination, dyspnea, blood tinged froth at the nose and/or mouth, edema and/or hyperemia of the throat area, etc.--shall be examined by an MPI veterinarian. Upon recovery, such animals may be released for slaughter.

(7) Brucellosis reactors. Identity of these animals must be maintained. Any information, including animal's disposition, shall be recorded and sent to Federal and State Agencies responsible for disease control and eradication.

(8) Tuberculosis reactor, suspect, exposed. Before ante-mortem inspection is performed, the animal must be identified by establishment personnel

as a "reactor," "suspect," or "exposed." This information is on accompanying Form VS 1-27 or similar form. To maintain control over infected herds, some "exposed" animals may be identified with a reactor tag and/or "T" brand.

The reactor number on the metal ear tag should be recorded. Animals without tag, but otherwise identified, should be described by recording data such as color, breed, sex, horns, estimated weight, brand marks, etc.

Condemned or DOA animals shall be given a complete post-mortem examination in the inedible department.

(9) Hyperimmune horses. Horses hyperimmunized against human pathogenic microorganisms--meningococci, streptococci, etc.--and those used for producing gas gangrene, tetanus, or diphtheria anti-toxins must not be slaughtered for human or animal consumption.

(10) CNS disorders. Animals with central nervous system disorders--depression, drowsiness, weakness, coma, licking, staggering, circling, muscular tremors, etc.--shall be condemned. Such signs could be indicative of sporadic bovine encephalomyelitis, infectious thromboembolic meningo-encephalitis, and various poisonings (metal, salt, plant, fluorine, pesticide, etc.).

(11) Rabies. Animals showing symptoms of rabies must be condemned.

Animals bitten by a rabid animal must not be slaughtered for food purpose for at least 8 months.

(12) Vesicular diseases. Animals with a vesicular condition must be held and reported immediately (by telephone) to nearest VS office.

Federal and State officials of animal disease control will make the final diagnosis and instruct on disposition and facility disinfection.

* (13) Myiasis. Animals with wounds
* infested with maggots must be segregated and maggot specimens taken to
* Change 75-4

identify possible screwworm infestation (21.4(e)).

*

*

(b) Livestock-Poultry

Research animals. Experimental or research animals shall not be slaughtered unless authorized by FO, Washington, D.C.

(1) Drug withdrawal. Animals that received a drug or chemical and are presented for slaughter before the required withdrawal period is completed must be withheld from slaughter until such period elapses.

(2) Poisoning (drug, chemical). Animals with drug or chemical poisoning signs shall be withheld from slaughter.

Regional Director and FO shall be immediately notified as to history and number of animals, signs, and other pertinent information.

(c) Poultry Reportable Diseases

(1) Report. In case of a suspected reportable disease, inspector in charge shall (1) immediately notify plant management, (2) obtain flock's history, and (3) inform (by telephone through area supervisor) appropriate Federal and State officials.

(2) Slaughter suspension. When a flock slaughter is initiated and subsequent live poultry are found with a reportable disease, the flock shall be withheld until history is obtained, Federal and State authorities are notified, and action is initiated. This may require flock quarantine and treatment.

(3) Removal. Poultry with or suspected of a communicable disease may be removed from the plant at owner's request. However, they are subject to Federal and State laws on disease control and eradication.

(4) Ornithosis. Signs of this disease are indistinguishable from those of C.R.D., Newcastle, and other poultry diseases.

dressed poultry chilled before evisceration.

(2) **Scar tissue.** Healed lesions are considered wholesome. However, excessive scar tissue is objectionable to consumers and should be removed and condemned.

(3) **Skin sewing.** Sewing skin tears in torn or trimmed areas is permissible, provided it is sanitary and a tag, attached to the thread, clearly reads: "Skin Separations Caused by Tears or Removal of Tissue Sewed Together With White Cotton Thread. Remove Tag Before Cooking; Remove Thread Before Serving." Such tag shall be approved by STS-LP.

Only clean needles (4 inches or longer) and clean thread shall be used. The inspector shall assure that all needles are accounted for at end of operations.

(k) Breast Muscle Atrophy

Atrophied turkey breast (green atrophy, green breast, green muscle degeneration) is known to often be a breeding flock problem. Detection of early stage is difficult on routine post-mortem examination. The congestion created at the post-mortem station by the incidence indicative of flock involvement makes sanitary trimming difficult and seriously impedes processing. The procedures outlined below respond to these problems.

1. When the inspector in charge determines that incidence is sufficiently high to indicate a flock problem, entire flock shall be retained pending completion of item 3.

2. Retained lot will be processed in the normal manner except that trimming related to "atrophied turkey breast" need not be conducted at the inspection station. Other required trimming must be conducted without regard to this exception.

3. Control of retained lot must be maintained until it is "raw deboned" in facilities approved for raw deboning

operations, or until post-mortem inspection is completed after chilling and in suitable facilities by bilaterally slashing each turkey breast and conducting necessary trimming. Either operation must be conducted under direct supervision of an MPI inspector.

Shipments of retained product (product not treated as in item 3) may be made only under official seal. Receiving inspector is responsible for assuring that further processing is conducted only as permitted by these instructions.

NOTE: Since the telltale breast concavity is more apparent during two-point suspension of the carcass and breast muscle can also be more readily exposed at this point, the first sign of involvement should prompt an examination for incidence at a location on the line where such suspension is practiced.

(l) Tumor

A malignant tumor requires carcass condemnation. A benign tumor, without carcass involvement, requires condemnation of affected organ or part only.

(m) Melanosis

Carcasses with small skin melanin deposits may be passed. Large deposits require removal and condemnation of affected tissues.

Certain breeds--Barred Plymouth Rock Chickens, Bronze Turkeys, etc.--normally show large melanin amounts in skin, shanks, etc. Small melanin deposits in the skin may give a greenish cast that should not be mistaken for "green struck" (decomposition).

Melanin may accumulate in certain tissues with age (guineas). Dark pigmentation of connective tissue and periosteum of cervical and thoracic vertebrae, and ribs is frequently observed in some bronze turkeys. If exposed to sun, some "bare back" turkeys may develop "blue backs," a condition similar to tanning of human skin that should not be considered pathologic.

(n) Parasites

Yellowish calcareous nodules in the subcutaneous tissue are parasitic lesions of a mite (*Laminosioptes cysticola*), occasionally seen in all poultry classes.

Carcasses may be passed after complete skinning and removal of affected tissues.

(o) Cadaver

Poultry dead from causes other than slaughter are "cadavers." Improper slaughter cuts, inadequate bleeding time, etc., may result in birds entering the scald water with insufficient bleeding or while still breathing (drowning).

Cadavers show: light red to deep cherry red skin, enlarged visceral blood vessels, congested heart, liver, and spleen.

Cadavers must be condemned and recorded on Form MP 514.

Note: Ducks - The slight visceral congestion in waterfowl is considered a physiologic variation, not to be used as indication of cadaver.

(p) Decomposition

It may be characterized by dull-gray to green struck appearance; slimy, sticky tissues; stale, musty, sour, or putrid odor. Washing to remove such odor is unacceptable.

Carcass disposition shall be as required by regulations (381.93).

Rancid fat. When the normal fat color is changed from bright yellow to white, and the odor is fruity, stale, or musty, fat shall be condemned.

(q) Emaciation

Carcasses with emaciation shall be condemned and recorded under septicemia and toxemia. Mere leanness should not be confused with emaciation.

(r) Tuberculosis

Specimens from young poultry suspected of tuberculosis shall be sent to the Microbiology Laboratory, P.O. Box 348, Beltsville, Maryland 20705.

(s) Septicemia, Toxemia

They are generalized conditions, characterized by cyanosis, hyperemia, anemia, edema, dehydration, etc., and/or localized inflammatory lesions. Individually these signs may be the result of localized conditions, not always justifying carcass condemnation.

Fat discoloration on the heart's coronary band and thigh's anterior edge may indicate septicemia when associated with other pathologic lesions. Such discoloration may vary from pale red to brownish red.

Various degrees of fat discoloration, frequently observed in healthy roosters or tom turkeys, are considered physiologic.

(t) Synovitis

Inflammation of synovial membranes, caused by injury, nutritional deficiency and/or micro-organisms. Synovitis may involve one or all synovial membranes and adjacent tissues, and may be associated with lesions in one or more organs. *

Swollen joints from mechanically impaired circulation should not be confused with synovitis. *

Carcasses with localized synovitis may be passed for food after removal of affected tissues; those with systemic change shall be condemned.

(u) Airsacculitis

Inflammation of air sacs resulting in formation of an exudate which may be seen in the air sacs and their diverticuli or in other areas if the air sac membrane is ruptured. *

* * *

(1) Disposition criteria.

a. Carcasses showing airsacculitis with evidence of systemic changes require condemnation of the carcass and its parts. *

b. If the exudate in the air sac is so extensive or of such a consistency that preparation of a wholesome *

carcass or parts cannot be accomplished, or interferes with proper carcass disposition judgment, the entire carcass shall be condemned.

- c. If a. and/or b. does not apply,
- * carcasses or parts of carcasses shall
- * be passed for food after complete
- * removal and condemnation of all
- * affected tissues and exudate.

* (2) **Salvage of portions.**

- * a. Poultry portions may be salvaged
- * provided the operation, approved by the
- * circuit supervisor, is done sanitarily
- * with continuous product flow and without pileup or delay.

- * b. Salvaged portions are chilled immediately with ice in continuous drained tanks.

The inspector in charge shall assure that all requirements of this section are met. Plant failure to comply with such requirements will result in discontinuing salvage operations.

* * *

(v) Leukosis

Since gross lesions of leukosis are evidence of systemic disturbance, affected carcasses shall be condemned.

Gross lesions may appear in one or more tissues. However, organ enlargement may not necessarily be evidence of leukosis.

(1) **Inspector's authority.** Line inspectors are trained to recognize leukosis lesions and, under veterinarian's supervision, they are permitted to condemn carcasses affected with such lesions. However, they shall retain any questionable carcass for veterinarian's disposition.

(2) **Affected organs, tissues.** Leukosis lesions vary in size, shape, location, color, etc. Following are the most common lesions, organs, or tissues involved.

(1) Liver, spleen, kidney, lung, pancreas, intestine, heart, gizzard, proventriculus (stomach).

Whitish gray (lymphoid tissue) masses, fairly uniform and oval, single or multiple, occurring in one or more organs. Lesions may vary in size up to an inch or more and may involve the entire organ or be imbedded in the organ to require palpation for detection.

One lesion smaller than one millimeter in size cannot be positively identified as leukosis. When such a lesion is observed, other evidence should be present for condemnation.

Liver lesions may be spread throughout the organ causing size increase and change in texture and color. In this case individual tumors may not be noticeable.

(11) Ovary. Ovaries appear cauliflower-like, with thickened folds and

reduced granular appearance. They are moderately to greatly enlarged and easily broken apart.

(iii) Testicle. Testicles may appear as solid tumors, enlarged, irregularly shaped, and lumpy with whitish gray lesions.

(iv) Muscle. Lesions may appear as solid tumors, or they may be mushy when necrotic. They may show a yellowish or grayish discoloration.

(v) Skin. Skin leukosis appears as enlargement of feather follicles, common on legs, breast or neck, but it may be on entire body. These nodules may be pearly, yellowish, or grayish.

When carcass cuticle is removed with hard (hot) scald or barking, color contrast of nodule is increased. When scattered follicles are affected, feather tract pattern appears disrupted mostly on legs.

Lesions may vary in size. They may be extensive, coalesce, and become ulcerous.

Reddening of follicles alone should not be confused with leukosis:

(vi) Nerve. The nerve is enlarged, misshaped, and discolored with loss of cross striations. One or more nerves and ganglia may be affected in varying degrees.

(vii) Osteopetrosis. Long bones are usually involved which show general enlargement of bone shaft. Bone thickening may be so extensive to fill in the marrow cavity. In advanced cases, this brittle bone will break smoothly instead of roughly as in normal bone.

(w) Ornithosis

Lesions of ornithosis are not pathognomonic nor constant. Positive diagnosis may be done by laboratory only. The following gross lesions may be observed:

(f) Calves

"Hide-on" calf carcasses must be marked "U.S. Inspected and Passed" at the originating establishment.

Carcasses shipped to other plants must be marked with the receiving establishment number and inspection legend after hide removal.

16.7 PRODUCT BRANDING

(a) Meat Cuts

Meat cuts from carcasses marked at another plant shall be branded with the official inspection legend and number of the establishment where cut.

(b) Special Marking

(1) "Tender." This word or its derivatives may be branded only by processing plant on pork product heated to an internal temperature of at least 140° F.

(2) "Cooked," "Ready to Eat," etc. The terms "cooked," "fully cooked," "thoroughly cooked," "ready to eat," or "ready to serve" on heated and smoked pork product are acceptable, provided product shows cooked characteristics (partial meat-bone separation, easy tissue separation, cooked, color, texture and flavor). This usually requires a minimum internal temperature of 148° F.

When marking devices are submitted for approval, proposals for use of above terms should describe processing procedure and internal temperature attained.

(3) Cereal, NFDM, etc. added. Unless otherwise specified, the statements "cereal added," "nonfat dry milk added," "artificially colored," shall be marked on product and on identifying devices attached to product in the order the ingredients are added during processing.

16.8 GRADING

(a) Meat

(1) Carcasses. The following grade-marks may be applied to carcasses by Meat Grading Branch (MGB) representatives: Cattle--prime, choice, good, standard, commercial, utility, cutter, canner. Calves, veal--prime, choice, good, standard, utility. Sheep--prime, choice, good, utility.

(2) Cuts. *

(i) Labeling; identification. When wholesale or retail cuts from federally graded carcasses are to be labeled or identified with official grade names, such cuts must bear the official USDA grademark--prime, choice, good, etc.--as applied by a USDA grader. If such grademark is removed during cutting or trimming, one of the following procedures must be implemented: *

1. All cutting, trimming, packaging, and labeling must be done under continuous USDA grader's supervision. *

2. At plant's request, cuts may be rebranded according to procedures acceptable to MGB. *

3. Any other procedure devised by the plant must assure adequate control over grademarking or labeling, and must be submitted through inspector in charge to RD for approval. *

(ii) Grademark misuse. When an official grademark does not comply with these requirements or is otherwise misused, the inspector shall: *

1. Retain all product packaged and labeled with such grade name and produced during the shift in which the deviation is discovered until the grade name is removed or obliterated. *

2. Through inspector in charge inform area supervisor and, if plant has Federal grading service, MGB main station supervisor. *

3. Discontinue product labeling until plant management provides the area supervisor with written explanation of the incident and corrective *

actions to prevent recurrence, and area supervisor concurs with such actions.

Unless approved requirements are met, inspector in charge, in cooperation with plant management, shall initiate action to rescind approved labels or other plant-owned marking devices bearing official grade names.

Transmittal forms, submitted with labels, or marking devices bearing official grade names shall contain the following statement: "The product for which this is intended bears a grademark or is handled according to MPI's approved procedures."

(b) Poultry

Section 381.129(b)(1) of the poultry products inspection regulations reserves the letter grade designations A, B, and C only for products officially graded by Federal or Federal-State grading service.

Products labeled with terms such as prime, premium, best, Number 1, or any other indication of superior or top quality must be equivalent to the U.S. Grade A, or under section 381.129(b) they are considered to

- * have misleading labeling, unless
- * the terms are preceded by possessive
- * nouns or pronouns such as "John Doe's
- * Premium Quality," "Our Best Quality,"
- * etc.

Inspectors will assure labeling accuracy by spot checking as is done for other labeling information. Spot checks will be based upon U.S. grade standards and, in plants with inspection and grading services, such checks are to be done by grader in charge, or by grader in charge and inspector in charge jointly. When spot checks are done by grader in charge, the grading information will be given to inspector in charge for product disposition.

Where quality level of product is indicated by a tradename only, the inspector in charge should check only to assure that no other indication of grade is on the labeling material.

HORSE OR OTHER EQUINE MARKING

Subpart 16-C

(Regs: M-312, 316)

16.11 MARKING

Horse or other equine carcasses and product must be marked with inspection devices specified in 312.3 of the meat regulations.

(a) Packed Product

Chunks or larger pieces, or product packed in properly marked shipping containers, shall be individually marked, unless shipped from one official plant to another under Government lock or seal.

(b) Tenderloins

Each equine tenderloin shall be marked before shipping.

(c) Cloth Covered Product

Official inspection legend and establishment number may be applied to outer cloth covering of horse or other equine meat or meat product with the 2 1/2 inch rubber brand, provided the applicable terms—"horse meat" or "equine meat," "horse meat product" or "equine meat product"—are closely marked to each brand.

Stencils. Above terms may be stenciled on shipping containers next to inspection legend and establishment number. Letters shall be at least 1 inch high.

(d) Green Ink

The following formula has given satisfactory results: FD&C Green No. 3 (fast green FCF) - 3 1/2 percent; dextrose (corn sugar) - 3 percent; water - 16 percent; edible shellac - 2 percent; 95 percent ethylalcohol - 75 percent.

TENDERIZING (MEAT)**Subpart 18-C**

(Regs: M-318)

18.16 PROTEOLYTIC ENZYMES**(a) Papain**

When papain or other proteolytic enzyme (with or without seasonings) is used on steaks and other meat cuts, enzyme action must be controlled. Enzyme solution must not result in product adulteration.

Enzyme and any ingredient added must be shown on the label.

(b) Equipment

Plants tenderizing meats (by injecting or dipping) shall provide adequate equipment to test treated product.

Although a slight temperature deviation does not affect the test, water bath equipment must maintain a relatively constant temperature, determined by a maximum-minimum indicator thermometer.

During the test, keep product under Government lock or seal.

(c) Test

About 4-ounce samples of enzyme treated and untreated diaphragm or other muscle are put into waterproof plastic bags. Such bags are then put into a water bath at 140° F. when bromelin is the predominant enzyme, and at 153° F. when papain is predominant. After a 4-hour incubation, samples are removed and proteolytic activity determined. Untreated control samples should remain firm and rather tough. Treated samples should show moderate to extensive protolysis -- ease with which muscle fibers are parted (loosening and/or softening of intermuscular connective tissue).

(d) Inspector

The inspector will follow above procedure to check enzyme-treated meats for tenderness. When samples show improper enzymatic activity, he shall inform plant management and take corrective action to prevent product misbranding or mislabeling.

INGREDIENTS**Subpart 18-D**

(Regs: M-318; P-Subpart O)

Only approved and properly labeled ingredients shall be used in meat or poultry products.

18.19 MEAT-POULTRY ITEMS**(a) Meat**

(1) Acceptance. Meat and meat food products may enter official plants, provided they comply with regulations.

(2) Record. Receiving establishment must maintain a record of all received product showing that it was from federally inspected plants.

(3) Bone. Crushed or ground bone is not permitted as ingredient in meat or poultry products. However, wholesome bones from U.S. inspected and passed carcasses may be used in manufacture of soup stock intended as an ingredient of meat food product.

Bone crushing may be conducted in edible product departments, provided it does not create an insanitary condition.

(4) Ice-glazed product. Must be clean, wholesome, and identified as federally inspected and passed. If

soiled, it may be reconditioned by washing with water sprays (see Subpart 18-N).

(5) Lips. Lips of cattle, calves, sheep and goats are permitted in meat food products provided the conical papillae are destroyed by finely chopping, or by cooking and removing the mucosa.

(6) Pork stomachs. They are considered meat byproducts rather than animal casings, even though they are intended for use as containers of meat food products.

(7) Pork jowls; slicing. Large, inverted hair follicles must be removed from pork jowls before they are used in further processing or before shipping.

Pork jowls to be used in fabricated products or in edible rendering shall be completely sliced or deeply scored from the "meat" surface downward in sections about 1 inch apart, and cut surfaces observed for abnormalities.

- * Pork jowls for use as "Smoked
- * pork jowl Bacon Squares" may be processed without scoring, provided they
- * are closely observed for abnormalities
- * during preparation.
- * Mechanical slicing or scoring of
- * unfrozen jowls is acceptable, provided (i) all cut surfaces are immediately observed for abnormalities,
- * and (ii) acceptable facilities are
- * available for cleaning and sanitizing
- * contaminated equipment.

(8) Pork skin, rinds, snouts, lips, ears. They shall not be shipped unless they are free from visible hair roots, and are suitable for inclusion in meat food product (souse, scrapple, head cheese, etc.).

Exception! Freedom from visible hair roots is not required if above byproducts are used for rendering or gelatin manufacture.

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(b) Meat and Poultry

(1) Byproduct. Byproducts must be properly handled and chilled or frozen to prevent unsoundness. Occasionally, they are bulk packed before chilling. In this case, freezing must be followed by further examination to detect possible unsoundness.

Byproducts must be properly drained before packing or before being used as ingredients in food products. Improper draining after washing can carry excess water into packages or manufactured food product.

(2) Gelatin. It may be used for binding and congealing certain meat or poultry products. It should be carefully controlled. When sampling product, show amount of gelatin used on Form MP 22.

Poultry products with more than 3 percent gelatin shall be labeled to include "gelatin added," "with gelatin," or the like. Natural gums and extracts added as jelling agents may be used only in amounts necessary for intended purpose.

(3) Fat. Edible fat from federally inspected plants may be brought into an official plant, if in closed and properly labeled containers, or under Government seal.

When rendered or unrendered poultry fat is received frozen, the block should be cut or broken to insure soundness.

18.20 NONMEAT-NONPOULTRY ITEMS

(a) Identification; Labeling

All materials--curing mixtures, seasonings, spices, tomato puree, cereals, nonfat dry milk, etc.--must be labeled to show name of article, list of ingredients if composed of two or more, and amount or percentage of each restricted ingredient.

Mixtures of spices or other flavoring or seasoning components--spice extractives, oleoresins of spices, essential

- * oils, disodium inosinate, disodium
- * quanylate, hydrolysates of animal or
- * plant origin such as gelatin, hydro-
- * lyzed vegetable protein, hydrolyzed
- * plant protein, soy products, or combi-
- * nations of these materials-- are not
- * acceptable for entry into an official
- * establishment for use when premixed or
- * blended with nitrites and/or nitrates.
- * Such mixtures without nitrites or
- * nitrates or those which include
- * separate and distinctly identified
- * packages of nitrites and/or nitrates
- * in their containers are acceptable.
- * This restriction does not include
- * curing compound premixtures or blends
- * of nitrites and/or nitrates with salts,
- * sugars, corn syrup solids, and mono-
- * sodium glutamate.

All materials should be enclosed in sanitary containers bearing name and address of manufacturer or other qualifying phrase if other than the manufacturer, such as "manufactured for," "packed for," or "distributed by."

- * All substances used in meat or
- * poultry products must be approved
- * (318.7 and 381.147) and be "food
- * grade" types. Phosphates, salt,
- * vinegar, and enzymes (purified) shall
- * be identified as "food grade" on their
- * containers. Any approved substance
- * identified as "FCC" (Food Chemicals
- * Codex) is acceptable.

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Form	Use	Copies	Submittal	Distribution	Other Information
*ANH 2-11, Report of Diseased Animals Found at Stockyards or Slaughter Establishments	Contagious and communicable diseases	4	See form	See form	Report identity of affected animals by phone or wire, &/or on this form
		*	* *		*
*ANH 3-62B, Clean, Wash and Disinfect This Car	As required	1	Upon completion	Attach to car	Card See Part 21
		*	* *		*
*VS 6-35, Report of Nonreactors Showing Tuberculosis Lesions or Thoracic Granulomas	Tuberculosis or thoracic granulomas	3	See form	With sample— Original and VSL copy. MPI copy-file.	Case number in block #2 is numbered consecutively for each establishment, beginning with case #1 each fiscal year. *
*ANH 17-33 Animals Imported for Immediate Slaughter	Import cattle	1	See form	See form	See Part 21
MP 12, Authorization Card	Cross-licensed inspector	1		Each employee	
MP 35, U.S. Rejected and U.S. Retained Tags	Identification of facilities, equipment or product in noncompliance	As required	Remove stub and retain until item acceptable. Attach to item(s).	Remove tag when item in acceptable. Discard tag and stub.	Used and removed by inspection personnel only. Indicate initials on tag, date, inspector's and corrective action. *
DPSC Form 2662, Report of Nonconformance Supplies	Material rejection		By military See Subpart 20-A	See Subpart 20-A	See form

* = Meat only
 ** = Poultry only

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COOPERATION WITH OTHER AUTHORITIES (MEAT)

VETERINARY SERVICES

Subpart 21-A

21.1 REPORTABLE DISEASES

Anthrax, bluetongue, cysticercosis, hog cholera, scabies, scrapie, tuberculosis, contagious ecthyma, myiasis, and vesicular diseases must be reported to VS. A VS inspector may want to examine animals with scrapie or scabies.

21.2 FOREIGN DISEASES

Foot-and-mouth disease, rinderpest, African swine fever, contagious bovine pleuropneumonia, and Teschen's disease are not present in USA.

If suspicious symptoms are observed, contact the nearest VS field veterinarian. If he cannot be reached, notify the State VS veterinarian in charge and FO.

21.3 ANIMAL IDENTIFICATION

* In most cases, cattle identity is established by ear tag, sales tag or backtag. In mature cattle, hide brands may be useful. If available, hide brands should be shown with eartag numbers on Forms ANH 2-11 and VS 6-35.
* Any method which will maintain carcass identity with identification (ID) devices throughout post-mortem inspection is acceptable. One successful method uses a 3-section plant tag. One section is fastened to the carcasses, one to the head, and one is put in the plastic bag with all ID devices.

* * *

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21.4 REPORTING PROCEDURES

(a) Communicable Diseases

By collect wire, addressed to VS veterinarian in charge of State of origin, immediately report any unusual condition suggestive of animal communicable disease.

Form ANH 2-11 is used for reporting diseases other than tuberculosis.

(b) Mucosal Diseases

When mucosal disease complex conditions are observed, immediately call (collect) VS veterinarian in charge of origin State. If origin cannot be determined, notify the veterinarian in charge of the State where animals were slaughtered. Confirm telephone report with completed Form ANH 2-11.

(c) Hog Cholera

Promptly report by collect call all cases of hog cholera-like symptoms or lesions to VS veterinarian in charge in the State where animals are located. The telephone report must have enough information to aid in traceback.

Swine from hog cholera quarantined areas, or those exposed to hog cholera are shipped under VS seal and accompanied by Form VS 1-27. Receiving MPI inspector will (1) remove the seal, (2) complete Form VS 1-27, and (3) send copy to State of origin VS veterinarian in charge of swine received.

When an inspector is not on duty, some shipments arriving at the official plant may need to be unloaded before an inspector is available. In this case, the inspector adds this information on back of VS 1-27, and includes swine description, number of animals, special marks, seal broken by plant employee, slaughter date, plant's name and location, and inspector's name and title.

(d) Tuberculosis

(1) Nonreactor. Report all non-reactor cattle and calves with lesions resembling tuberculosis and all mature cattle with thoracic granulomas, except those considered to be coccidioidomycosis found in feedlot steers and heifers, on Form VS 6-35. Report routine "passed for cooking" and condemned carcasses on a separate form in States having a swine tuberculosis program, and not on VS 6-35. Only swine having gross lesions of tuberculosis involving thoracic cavity will be reported on Form VS 6-35.

(2) Reactor. Lesions from reactors shall be accompanied by Form MP 23.

(3) Specimens. Tuberculosis lesions and thoracic granulomas shall be sent to Veterinary Services Laboratory (VSL), P.O. Box 70, Ames, Iowa 50010, for diagnosis. Trim lesions free of fat, divide into blocks approximately 1/2 inch thick, and place in formalin and sodium borate solution (SBS) provided in shipping container. Maximum solution to tissue ratio is 10 to 1 for formalin, and 1 to 1 for SBS. Lesions too small to be divided shall be sent in formalin. When laboratory assistance is needed to determine cattle carcass disposition, check Item 18 on Form VS 6-35 and attach Form VS 10-23 (inside box flap) to outside of mailing box. Leave all identifying devices from each animal in plastic bag, and send to VSL in box with specimens. Do not remove sponge. When laboratory assistance is needed to determine swine carcass disposition, send specimen to MPI laboratory with MP 23.

* (e) Myiasis

- * When animals with maggot infested
- * wounds are observed, collect at least
- * 10 larvae, some from deep within the
- * wound. If larvae are of different
- * size or age, collect samples of each
- * size. Put specimens in blood tubes

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containing alcohol as preservative and*
send them air mail, with completed *
form ANH 2-11, to Veterinary Services *
Laboratory, USDA, APHIS, Parasitology *
Section, Building 320, ARC-East, *
Beltsville, Maryland 20705. *

21.5 TRANSPORT VEHICLE CLEANING

MPI personnel will supervise handling of trucks, trailers, and railroad cars used for animals affected with an infectious disease and received at federally inspected plants where VS employees are not stationed.

For cleaning and sanitizing, see regulations (9 CFR 71) and use procedures outlined below.

(a) Trucks, Trailers

Once a plant employee is instructed on procedures to follow in cleaning and disinfecting trucks, inspector does not need to supervise disinfection of every truck. However, he must assure that:

1. Trucks are properly cleaned before applying the disinfectant.
2. Spraying equipment is adequate.
3. An ample supply of a permitted disinfectant is available.
4. Mixed disinfectant is of proper strength.
5. All inner surfaces of trucks are saturated with disinfectant.

Plant employee should keep a record of cleaned trucks or trailers by recording their license numbers.

(b) Railroad cars

When an infectious car is received, the inspector shall:

1. Securely attach a placard, ANH 3-62B, to each side of the car, telephone responsible railroad official, and confirm by letter.
2. Where possible, arrange to supervise disinfection of all infectious cars received.

(c) ANH Forms

See Part 20.

21.6 MARKET CATTLE TESTING (MCT)**(a) Blood Collection**

MPI is responsible for collecting blood samples at federally inspected plants from mature cattle.

* * *

(1) Mature cattle. The inspector shall:

* a. Take blood samples from all
* mature cows and bulls. Mature cows
* and bulls are defined as being 2
* years of age or over, and parturient
* or post-parturient cows less than
* 2 years old.

* * *

b. Take blood samples from bleeding animal, brachial plexus, heart, or any other adequate method. About one-half to three-fourths tube of blood provides the right amount for laboratory handling.

* c. Place blood sample in plastic bag
* with all identifying devices. Maintain
* samples in same sequence as collected
* to correlate with plant's daily kill
* schedule. Send blood samples and
* identifying devices to appropriate
* laboratory. Include daily kill
* schedules. Since all identification
* devices are submitted with specimen
* from nonreactor cattle with lesions of
* tuberculosis or thoracic granulomas,
* identify blood samples from such carcasses collected for MCT program as
* "VS 6-35."

d. Assure that samples are protected from freezing, moisture, or contamination, and refrigerate them at 35-40° F. after serum separation.

e. When possible, mail blood samples daily or at least every other day, unless local arrangements are made for pick up. Franked labels, addressed to the proper laboratory, are provided.

(2) Sample tubes, mailing boxes.

The State VS staff will arrange for supplying blood sample tubes, mailing boxes, franked labels, record forms and racks at each plant involved.

(b) Program Operation

* MCT blood samples are being collected
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at practically all federally inspected plants. Where not done, local VS representative and MPI area supervisor make necessary arrangements with plant to institute a program.

RD develops necessary working arrangements with all plants in his region after initial arrangements have been agreed to, and by working closely with VS Directors in their respective regions.

In these arrangements, MPI acts as an agent for VS in collecting blood samples and related activities dealing with animal disease found on post-mortem inspection. VS and MPI arrange for collecting blood samples at all plants under Federal inspection. In plants where MPI personnel are unable to collect samples, arrange through VS to have a plant employee or contract technician collect samples under MPI supervision.

21.7 IMPORTED CATTLE

Broker, commission agent, packer, or other responsible person must notify the veterinarian in charge when Canadian cattle are received at an official plant and must identify such cattle to the inspector. After slaughter, MPI will notify the VS inspector in charge at the border point of entry by using Form ANH 17-33. MPI will complete this form only for animals slaughtered in federally inspected plants.

Tuberculosis. If tuberculosis lesions are found in Canadian cattle, prepare specimen and complete Forms VS 6-35, ANH 17-33 and submit with all identifying devices to VSL, Ames, Iowa.

stationery:

"I certify that the product shipped under the certificate has been processed by a method, approved by the United States Department of Agriculture, which is adequate to destroy any possible live trichinae. I further certify that this product has been held in a freezer for a period of not less than 30 days at a temperature not in excess of 5° F."

(Signature)

"Yo certifico que el producto enviado y amparado por este certificado ha sido processado por metodos aprobados por el Departamento de Agricultura de los Estados Unidos y que son adecuados para destruir cualquier tricquina que pudiera existir. Asimismo certifico que este producto ha sido mantenido en un congelador durante un periodo no menor de 30 dias y a una temperatura no excediendo 5 grados Fahrenheit."

A variation of the certificate describing other methods of treating pork for trichinae may be issued. However, accurate Spanish translation must be provided.

(b) Poultry Products

Issue Form MP 506.

22.68 WEST AFRICA

Poultry Products

Importation of chickens is prohibited. A license will not be issued to any firm or private individual to import chickens from any source whatsoever.

22.69 WESTERN SAMOA

Poultry Products

Only veterinary inspectors will issue Form MP 506 for ready-to-cook poultry.

PART 23

LABORATORY SERVICES

CHEMISTRY

Subpart 23-A

(Regs: M-318; P-Subpart O)

23.1 CHEMISTRY LABORATORIES

(a) Type of Analysis

Chemistry laboratories conduct general chemical analysis of meat and/or poultry products to determine moisture, protein, salt, nitrite, nitrate, total fat, animal fat, etc. They also analyze products for biological residues, nonmeat or non-poultry food additives, and various chemical compounds used in federally inspected plants.

(b) MPI Laboratory

Laboratories serving designated geographical areas and their code numbers are:

	San Francisco, California	0601
	Washington, D.C.	1101
*	Athens, Georgia	1301
	Kansas City, Kansas	2001
	St. Louis, Missouri	2901
	Omaha, Nebraska	3101
*	Peoria, Illinois	1702

Address and telephone number of these laboratories may be found in the "Working Reference" (Directory of Meat and Poultry Inspection Program Establishments, Circuits and Officials).

(c) AQC Laboratory

A plant or commercial laboratory approved by STS-SDS to analyze samples

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in conjunction with approved quality control systems.

(d) Certified Laboratory

A plant or commercial laboratory certified by STS-CH for analysis of only water, protein, salt and fat in meat and/or poultry products. *

The inspector may use results from certified laboratory with same authority as from an MPI laboratory.

Name, address, and telephone number of certified laboratories are listed in the working reference.

(1) Companion and verification samples. When a plant elects to use a certified laboratory and is under lot inspection, the inspector should submit companion samples to MPI laboratory to determine the certified laboratory's continued analytical capability. He shall submit about 25 percent of the samples sent to the certified laboratory and withhold identity of such samples from certified laboratory and plant.

When a plant is under AQC, verification samples are submitted to MPI laboratory to determine accuracy of such control.

(2) Correlation of Results. MPI laboratories shall summarize companion sample results biweekly and send a copy to STS-CH.

Certified laboratories shall summarize official sample results and report them biweekly to STS-CH on Form MP 19, which will be signed also by the inspector, if the certified laboratory is a plant laboratory. *

The two sets of results will be matched by computer.

When insufficient correlation exists between paired samples or when official

sample results are not received by STS-CH, RD will be advised, and certified laboratory will be removed from working reference.

Official use of certified laboratory's results is at RD's discretion, regardless of initial certification and analysis of later results by STS-CH.

- * Since companion samples are only to
- * determine the continued analytical
- * capability of a certified laboratory,
- * such sample results are not mailed to
- * inspectors.

23.2 SAMPLE SELECTION

(a) Meat-Poultry Product

All samples should be randomly selected and adequately represent batches and/or lots.

- * For chemical analysis, select approx-
- * imately a 1-pound sample.

- * A sample may be a whole unit, more
- * than one unit, or various portions of
- * a unit. A unit is a single processed
- * piece (can, package, etc.).

- * (1) Packaged product. If unit
- * weighs less than 12 ounces, select
- * enough units to weigh approximately
- * 1 pound. If unit weighs more than
- * 1 1/2 pounds, randomly select portions
- * to weigh approximately 1 pound.

* (2) Canned product

- * (i) Unopened (all types). Select
- * one unopened unit. If unit weighs
- * less than 12 ounces, select enough
- * units to weigh approximately 1 pound.

- * (ii) Opened (further processed, i.e.,
- * slicing or bulk packaging). Randomly
- * select from various areas of one unit
- * enough sections or slices to weigh 1
- * pound.

- * (3) Cured pork. Select one unit and
- * prepare as outlined in sec. 23.3(b).

- * (4) Cooked sausage. See section
 - * 18.24(g)(2) for frankfurters, bologna,
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and similar type products. For other *
sausages, sample as in 23.2(a)(1). *
For vacuum-packed product, select *
sample before vacuum packing. For *
vienna or other cooked sausage packed *
in media, select sample before *
canning.

(b) Nonmeat-Nonpoultry Items

Articles known to be unacceptable should not be selected. Laboratory analysis of such articles usually does not serve a useful purpose.

(1) Ingredients. Dry mixtures should be selected and submitted in smaller size plastic film bag (approximately 3 x 6 inches flat) and the bag should be almost filled.

Submit liquid materials in 4-oz., narrow-mouth plastic bottles.

If a shipment consists of more than one bag, one barrel, or one container, randomly select a proportionate number of samples throughout the lot.

(2) Adhesives, coatings, inks, pigments. Generally, these materials need not be sampled. If inspector has reason to doubt their acceptability, he requires plant or supplier to show a letter of acceptance from STS-CH. Plant management or supplier may obtain such letter by writing to Chemistry Staff, MPI, APHIS, USDA, Washington, DC 20250 (see 17.16).

(c) Chemical Compounds

See Subpart 8-F.

(d) Biological Residues

See Subpart 11-E.

23.3 SAMPLE PREPARATION

(a) Fresh Product; Formalin

Fresh products--pork sausage, hamburger, etc.--must be prevented from decomposition by adding approximately 10 drops of formalin to the sample and mixing it thoroughly by kneading the plastic bag after closing. Adding more

than 10 drops of formalin is detrimental to the sample. The sample form must carry a statement such as "formalin added."

(b) Cured Pork

(1) Skinning, boning, grinding, mixing. Each unit (ham, picnic, etc.) should be skinned, boned and ground at least twice in a grinder with plate openings not larger than 1/8 inch.

Follow above procedures without unnecessary delay and without use of equipment or material that may absorb moisture or juices. Retain liquids and put into the product. After each grinding, mix sample well. After thorough mixing, product should be quartered in a mixing pan or bowl.

(i) One sample. If only one sample is needed, take 4 ounces from each quarter and place into a plastic bag for shipment. Do not place paper or other absorbent material in the plastic bag with the sample. Close top of bag by twisting and applying several loops of a rubberband. Exclude as much air as possible. Tie neck of bag near the top to permit some expansion in case of decomposition and gas formation during shipment.

(ii) Two samples. If two samples are required, as in selecting samples for certified laboratory, remove 8 ounces from each quarter, mix and divide them into two 1-pound samples.

* * *

(2) Silent cutter. When samples are prepared with silent cutter, grind skinned and deboned product once, place in cutter bowl and chop (for about 3 minutes). Avoid prolonged chopping to minimize moisture loss. After chopping, quarter product in cutter bowl. Sample as outlined above.

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(c) Cooked Sausage

When selecting companion samples, prepare samples so that they will be true duplicates. Select samples for the certified laboratory from immediately adjacent sections of samples for the Federal laboratory. Each 1-pound unit will be packaged in a separate polyethylene bag. Identify each plastic bag with a label (piece of paper)--wrapped and secured around the bag by a rubberband--showing establishment and sample number, and the ("1 of 3," "2 of 3," or "3 of 3") number of samples. *

(d) Nonmeat-Nonpoultry Items

When sampling cereals, spices, and similar materials, the inspector should examine a sufficient quantity of the container contents to determine whether the article is uniform throughout and the sample that represents the lot.

23.4 FORMS

(a) Certified Laboratory

Mark each sample "certified laboratory program." Number samples in any one plant with establishment number and a 3-digit number starting with 101. When 999 is reached, start with 101 again. Example: "38-101" for the first sample submitted from establishment 38. Use Form MP 22 for samples to certified laboratory; complete block 16 of this form (rev. October, 1973). *

(b) MPI Laboratory

Use Form MP 22 or MP 23 (see Part 20). Identify each companion sample with its 3-digit sample number by entering on Form MP 22, block 13, "companion sample to certified laboratory, Sample No. _____."

(c) Proprietary Mixtures

When submitting samples of proprietary mixtures for analysis on laboratory form, show manufacturer's name and address, ingredients list

as shown on shipping containers, and purpose for which the mixture is intended.

(d) NFDM, MSG, Protein, Flour, etc.

When samples of product with nonfat dry milk, monosodium glutamate, isolated soy protein, soy protein concentrate, soy flour, hydrolyzed plant protein, gelatin, etc., are submitted, amount of additive in the
* formula must be indicated in block 15
* of Form MP 22 (rev. October, 1973).

(e) Luncheon-Potted Meat

Since water-protein ratio varies with percent of tripe, tongues, and hearts used in formulas, the inspector must record percentages of such ingredients on Form MP 22 when submitting samples for analysis.

23.5 SHIPPING OF SAMPLES

Exercise extreme care in preparing, packaging and mailing samples.

(a) Unsatisfactory samples

When plastic sample containers are broken, torn, or otherwise perforated, the sample is useless for analytical work.

Since decomposed or damaged samples adversely affect the accuracy of analytical results, they will not be analyzed.

Chemists in charge of laboratories will assist inspectors in developing satisfactory mailing procedures by reporting when samples arrive in unsatisfactory condition.

(b) Containers

Fiber cartons for forwarding samples are stocked at all MPI field laboratories. An adequate supply of sample containers and cartons shall be available at each plant. When fewer than three samples are placed in the carton, fill additional space with paper or other lightweight packing material.

(c) Mailing Franks

Form AD 11 may be obtained from regional and area offices, or by contracting a chemistry laboratory.

Inspector prepares one frank with address of appropriate laboratory (as in working reference), and one for return address of empty container. Place laboratory address on the container so that it is the only frank visible when the carton is tied and ready for mailing.

(d) POD Labels

POD 19 (airmail) and POD 38 (perishable) labels can be obtained from local post offices.

(e) Mailing

(1) Time. Do not mail samples to arrive at destination (laboratory's post office) on Saturday, Sunday or holidays. Hold at the plant samples taken toward end of week under seal and refrigeration, pending proper mailing time.

(2) Airmail. If a perishable sample is to be transported in excess of 200 miles, ship airmail to insure fast and efficient handling. To expedite delivery, inspector shall:

1. Clearly address the package by printing or typing name, address, and zip code of recipient on a U.S. Government Frank (Form AD 11) and firmly secure the frank to the package.

2. Securely fasten one POD Label 19 (airmail) to each package side.

3. Securely attach a POD Label 38 (perishable) to the package on same side of Form AD 11.

4. Deposit the package at local post office, when feasible.

(3) Air express. Do not ship samples by air express.

23.6 SPECIAL SAMPLES

When a sample is sent to the laboratory for special purposes, make a notation on the form to that effect,

or the form should bear reference to a letter or other communication. If a notation does not appear on the form to indicate special handling, the sample may be given the usual analysis for the class of product.

(a) Reimbursable

Identify each sample submitted under reimbursable program, (i.e., Food Inspection Service, Certification Service, specification work performed for other governmental Agencies, etc.) showing "Reimbursable" on Form MP 22 in the space to the right of Item 11, "Findings."

(b) Federal-State Program

Identify each sample submitted from plants operating under Federal-State Cooperative Program, described in the Wholesome Meat Act, by showing "WMA" in the Block of Form MP 22. Also, show State name in Block No. 1. Normally, samples taken under this program are submitted by a State inspector.

(c) Litigation Samples

Litigation samples are collected in anticipation or as a result of lawsuits involving alleged violations of the FMIA and PPIA.

The inspector must:

1. Protect identity and integrity of such samples at all times, by personally transporting them to the laboratory, or by shipping them "Registered" under seal.
2. Keep an adequate reserve sample under seal in case of loss or necessity for subsequent confirmation.
3. Notify the laboratory of shipping and approximate time of sample arrival.

(d) Samples Requested by STS-PS

Do not send samples submitted at request of STS-PS on matters handled by that office to chemistry laboratories (see Subpart 17-A).

(e) Vegetable Oil, Animal Fat

To determine whether animal fats have been added to product identified as "vegetable oil," send samples to:

Scientific Services Laboratory
USDA - APHIS - MPI
417 Federal Building
Kansas City, Kansas 66101

*
*

When mono- or di-glycerides are used, the inspector also submits a 1/4-pound sample of the mono- and/or di-glycerides.

The inspector should record on Form MP 22 product formulation, code markings and the following request: "for animal fat determination - send copy of results to FO - random sample program." He may also sample product at any time when he has reason to doubt product and/or label compliance. Form MP 22 should be completed and addressed as above, except the words "Random Sample Program" should be replaced by "Special Sample."

23.7 RECORDS

Maintain sample records at each plant. Such records should be as shown in Charts 23.1 and 23.2. Product name shall be that shown on the label. For product codes see Part 20, Exhibit A.

When a sample is submitted to the laboratory, enter sample number for each product in appropriate month column. When laboratory results are received, cross through the number on the chart representing that sample if in compliance, encircle if in violation.